

1. A cellulosic fiber composite comprising:
a cellulosic material; and
a resin binder comprising vegetable protein hydrolysates and a synthetic resin,
wherein
the synthetic resin is phenolic resin, isocyanate resin, or
combinations thereof, and
the composite contains an effective amount of resin binder so as to
bind together the cellulosic material, wherein the amount of the resin
binder is less than 40% of the dry weight of the cellulosic material.
2. The composite as claimed in claim 1 further comprising an average moisture
content between about 8% and about 35% by weight.
3. The composite as claimed in claim 1 wherein the vegetable protein is soy protein.
4. The composite as claimed in claim 3 wherein the soy protein is soy isolate.
5. The composite as claimed in claim 3 wherein the soy protein is soy flour.
6. The composite as claimed in claim 3 wherein the soy protein is a blend of soy
isolate and soy flour.
7. The composite as claimed in claim 6 wherein the weight ratio of the blend of soy
isolate to soy flour is about 50 : 50.
8. The composite as claimed in claim 1 wherein the synthetic resin is phenolic resin.
9. The composite as claimed in claim 8 wherein the phenolic resin is phenol
formaldehyde.

10. The composite as claimed in claim 8 wherein the resin binder has a weight ratio of protein hydrolysates to phenolic resin between about 10 : 90 and about 90 : 10.

11. The composite as claimed in claim 8 wherein the resin binder has a weight ratio of protein hydrolysates to phenolic resin between about 10 : 90 and about 75 : 25.

12. The composite as claimed in claim 8 wherein the resin binder has a weight ratio of protein hydrolysates to phenolic resin between about 25 : 75 and about 75 : 25.

13. The composite as claimed in claim 8 wherein the resin binder has a weight ratio of protein hydrolysate to phenolic resin between about 25 : 75 and about 50 : 50.

14. The composite as claimed in claim 1 wherein the synthetic resin further comprises paraformaldehyde.

15. The composite as claimed in claim 14 wherein the weight ratio of the paraformaldehyde to the total of the protein hydrolysates and the synthetic resin is between about 2 : 48 and about 15 : 35 based on 50% resin solids.

16. The composite as claimed in claim 1 wherein the synthetic resin further comprises high methylol content phenol formaldehyde pre-polymer.

17. The composite as claimed in claim 16 wherein the molar ratio of formaldehyde to phenol to NaOH of the high methylol content phenol formaldehyde pre-polymer is about 2 : 1 : 0.5.

18. The composite as claimed in claim 16 wherein the weight ratio of the high methylol content phenol formaldehyde pre-polymer to the total of the protein hydrolysates and the synthetic resin is between about 10 : 90 and about 90 : 10.

19. The composite as claimed in claim 16 wherein the weight ratio of the high methylol content phenol formaldehyde pre-polymer to the total of the protein hydrolysates and the synthetic resin is between about 25 : 75 and about 75 : 25.
20. The composite as claimed in claim 1 wherein the composite further comprises a silicone, silane, or combination thereof.
21. The composite as claimed in claim 20 wherein the silicone, silane, or combination thereof is applied as a coating to the composite.
22. The composite as claimed in claim 20 wherein the silicone, silane, or combination thereof is added to the resin binder.
23. The composite as claimed in claim 20 wherein the amount of silicone, silane, or combination thereof is between about 0.1% and about 1.0% based on the total amount of the cellulosic material.
24. A finished cellulosic fiber composite article prepared by the method comprising:
 - a. mixing a protein hydrolysate with a synthetic resin, wherein the synthetic resin is phenolic resin, isocyanate resin, or combinations thereof, to produce a resin binder;
 - b. mixing an amount of resin binder with a cellulosic material to form a cellulosic material/resin binder blend, wherein the amount of resin binder is less than 40% of the dry weight of the cellulosic material;
 - c. felting the cellulosic material/resin binder blend to form a low moisture-content mat; and
 - d. molding the low moisture-content mat at an elevated temperature and pressure, producing the finished cellulosic fiber composite article.
25. The article as claimed in claim 24 that further comprises a laminate overlay.

26. The composite as claimed in claim 1 wherein the synthetic resin is isocyanate resin.
27. The composite as claimed in claim 26 wherein the isocyanate resin is polymeric isocyanate.
28. The composite as claimed in claim 26 wherein the resin binder has a weight ratio of protein hydrolysates to isocyanate resin between about 10 : 90 and about 90 : 10.
29. The composite as claimed in claim 26 wherein the resin binder has a weight ratio of protein hydrolysates to isocyanate resin between about 10 : 90 and about 75 : 25.
30. The composite as claimed in claim 26 wherein the resin binder has a weight ratio of protein hydrolysates to isocyanate resin between about 25 : 75 and about 75 : 25.
31. The composite as claimed in claim 26 wherein the resin binder has a weight ratio of protein hydrolysates to isocyanate resin between about 25 : 75 and about 50 : 50.
32. The composite as claimed in claim 1 wherein the synthetic resin is a combination of phenolic resin and isocyanate resin.
33. The composite as claimed in claim 32 wherein the weight ratio of the isocyanate resin to the total of the protein hydrolysates and the phenolic resin is between about 25 : 75 and about 75 : 25.
34. The composite as claimed in claim 26 wherein the amount of isocyanate resin making up the composite is about 1% to about 6% based on the total weight of the cellulosic material.

35. The composite as claimed in claim 26 wherein the amount of isocyanate resin making up the composite is about 1% to about 3% based on the total weight of the cellulosic material.

36. The composite as claimed in claim 26 wherein the amount of isocyanate resin making up the composite is about 1% to about 2% based on the total weight of the cellulosic material.